

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

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1. (Currently Amended) A braking pressure control apparatus for controlling a pressure of a working fluid in a brake cylinder of a hydraulically operated brake in a hydraulically operated braking system for a vehicle, said braking pressure control apparatus comprising:

a first hydraulic pressure source including a power-operated pressurizing device for pressurizing the fluid;

a second hydraulic pressure source operable by an operation of a manually operable brake operating member, to pressurize the fluid to a pressure higher than a level corresponding to an operating force acting on said brake operating member;

a switching device for selectively placing the braking system in a first operating state in which said brake cylinder is operated with the pressurized fluid delivered from said first hydraulic pressure source while said brake cylinder is disconnected from said second hydraulic pressure source, and a second operating state in which said brake cylinder is operated with the pressurized fluid delivered from said second hydraulic pressure source while said brake cylinder is disconnected from said first hydraulic pressure source; and

at least one of (a) a change restricting means operable upon a switching of the braking system between said first and second operating states by said switching device, to restrict at least one of a change of an operating state of said brake operating member and a change of the fluid pressure in said brake cylinder, which changes take place due to said switching, and (b) a switching control device operable to control said switching device on the basis of a running condition of a said vehicle which has a wheel to be braked by said hydraulically operated brake while said vehicle is placed in a normal state.

2-21. (Withdrawn)

22-23. (Canceled).

24-36. (Withdrawn)

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37. (Previously Amended) A braking pressure control apparatus according to claim 1, wherein said switching device includes a selectively cutting-off device operable between a first cut-off state in which said brake cylinder is communicated with said first hydraulic pressure source and is disconnected from said second hydraulic pressure source, and a second cut-off state in which said brake cylinder is communicated with said second hydraulic pressure source and is disconnected from said first hydraulic pressure source.

38. (Previously Amended) A braking pressure control apparatus according to claim 1, wherein said hydraulically operated brake is provided for braking a wheel of a vehicle, and said switching control device command said switching device to establish said first state, when a running condition of said vehicle requires said brake cylinder to be operated with the pressurized fluid whose pressure does not corresponds to said operating force of said brake operating member.

39. (Previously Amended) A braking pressure control apparatus according to claim 1, wherein said hydraulically operated brake is provided for each of four wheels of a vehicle, and said switching control device commands said switching device to establish said first state, when a running condition of said vehicle does not require the brakes for the four wheels to be controlled in the same manner.

40. (Previously Amended) A braking pressure control apparatus according to claim 1, wherein said hydraulically operated brake is provided for braking a wheel of a vehicle, and said switching control device commands said switching device to establish said first state, when a running condition of said vehicle requires said brake cylinder to be

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operated with the pressurized fluid whose pressure is different from the pressure of the fluid pressurized by said second hydraulic pressure source.

41. (Previously Amended) A braking pressure control apparatus according to claim 33, wherein said hydraulically operated brake is provided for braking a wheel of a vehicle, and said switching control device is operable when said vehicle is permitted to run after having been inhibited from running to command said switching device to establish said second state, when said vehicle which has been inhibited from running is permitted to run.

42. (Previously Amended) A braking pressure control apparatus according to claim 1, wherein said hydraulically operated brake is provided for braking a wheel of a vehicle, and said switching control device commands said switching device to establish said second state, when said vehicle is stationary.

43. (Withdrawn)

44. (Previously Amended) A braking pressure control apparatus according to claim 1, further comprising a braking pressure control device operable when said first state is established by said switching device, to control the pressure of the pressurized fluid by which said brake cylinder is operated, on the basis of an operating amount of said brake operating member, and at least one of a rate of change of said operating amount and a derivative of said rate of change.

45. (Previously Amended) A braking pressure control apparatus according to claim 1, further comprising:

a stroke simulator device operable to permit flows of the fluid to and from said second hydraulic pressure source, according to an operation of said brake operating member; and

a diagnosing device for diagnosing said stroke simulator device for any abnormality thereof,

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and wherein said switching control device commands said switching device to establish said second state, when said diagnosing device determines that said stroke simulator device is abnormal.

46. (Previously Amended) A braking pressure control apparatus according to claim 1, further comprising:

a brake-operating-state detecting device for detecting an operating state of said brake operating member;

a diagnosing device for diagnosing said brake-operating-state detecting device for any abnormality thereof; and

a first-pressure-source control device for controlling the pressure of the fluid pressurized by said first hydraulic pressure source, on the basis of an output signal of said brake-operating-state detecting device,

and wherein said switching control device commands said switching device to establish said second state, when said diagnosing device determines that said brake-operating-state detecting device is abnormal.

47. (Previously Amended) A braking pressure control apparatus according to claim 1, further comprising:

a stroke detecting device for detecting an operating stroke of said brake operating member;

a force detecting device for detecting said operating force of said brake operating member;

a diagnosing device for diagnosing said stroke detecting device and said force detecting device for any abnormality thereof;

a first pressure control device operable when said stroke detecting device and said force detecting device are normal, to control the pressure of the pressurized fluid by

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which said brake cylinder is operated, on the basis of both the operating stroke and the operating force which are respectively detected by said stroke detecting device and said force detecting device; and

a second pressure control device operable when one of said stroke detecting device and said force detecting device is abnormal, to control the pressure of the pressurized fluid by said brake cylinder is operated, on the basis of an output signal of the other of said stroke detecting device and said force detecting device.

48. (Previously Amended) A braking pressure control apparatus according to claim 1, further comprising:

a plurality of operating-state detecting devices for detecting an operating state of said brake operating member;

a diagnosing device for diagnosing each of said plurality of operating-state detecting devices for any abnormality thereof;

a first pressure control device operable when said plurality of operating-state detecting devices are normal, to control the pressure of the fluid pressurized by said first hydraulic pressure source on the basis of at least one of output signals of said plurality of operating-state detecting devices; and

a second pressure control device operable when at least one of said plurality of operating-state detecting devices is normal and when at least one of said plurality of operating-state detecting devices is abnormal, to control the pressure of the fluid pressurized by said first hydraulic pressure source, on the basis of an output signal of said at least one operating-state detecting device which is normal.

49. (Previously Amended) A braking pressure control apparatus according to claim 1, which is provided for controlling the pressure of the pressurized fluid in each of a plurality of brake cylinders of a plurality of brakes, and wherein said first hydraulic pressure source

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includes a plurality of pressure control valve devices which are operable independently of each other to control the pressures of the pressurized fluid in said plurality of brake cylinders, on the basis of the fluid pressurized by said pressurizing device, said braking pressure control apparatus further comprising:

a plurality of braking-pressure detecting devices for detecting the pressure in said plurality of brake cylinders, respectively;

a diagnosing device for diagnosing each of said braking-pressure detecting devices for any abnormality thereof;

a connecting passage connecting two of said plurality of brake cylinders;

a communicating valve provided in said connecting passage;

a first pressure control device operable when said plurality of braking-pressure detecting devices are all normal, to control said plurality of pressure control valve devices on the basis of the pressures detected by said braking-pressure detecting devices; and

a second pressure control device operable when one of said plurality of braking-pressure control devices is abnormal and when the braking-pressure detecting device corresponding to the brake cylinder connected through said connecting passage to the brake cylinder corresponding to said abnormal braking-pressure detecting device is normal, said second pressure control device controlling the two pressure control valve devices connected to each other by said connecting passage, on the basis of the pressure detected by the normal braking-pressure detecting device, while said communicating valve in said connecting passage is open.

50. (Previously Amended) A braking pressure control apparatus according to claim 1, which is provided for controlling the pressure of the pressurized fluid in each of a plurality of brake cylinders of a plurality of brakes, and wherein said first hydraulic pressure source includes a plurality of pressure control valve devices which are operable independently of

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each other to control the pressures of the pressurized fluid in said plurality of brake cylinders, on the basis of the fluid pressurized by said pressurizing device, said braking pressure control apparatus further comprising:

a diagnosing device for diagnosing each of said pressure control valve devices for any abnormality thereof;

a connecting passage connecting two of said plurality of brake cylinders;

a communicating valve provided in said connecting passage;

a first pressure control device operable when said plurality of pressure control valve devices are all normal, to control the pressures in said plurality of brake cylinders, by controlling said plurality of pressure control valve devices, respectively; and

a second pressure control device operable when said diagnosing device determines that at least one of said plurality of pressure control valve is abnormal and when the pressure control valve device corresponding to the brake cylinder connected through said connecting passage to the brake cylinder corresponding to said abnormal pressure control valve device is normal, said second pressure control device controlling the pressures in the two brake cylinders connected to each other by said connecting passage, by controlling the normal pressure control valve device, while said communicating valve in said connecting passage is open.

51. (Previously Amended) A braking pressure control apparatus to according to claim 1, which is provided for controlling the pressure of the pressurized fluid in each of four brake cylinders of four brakes, and wherein said first hydraulic pressure source includes four pressure control valve devices which are operable independently of each other to control the pressures of the pressurized fluid in said four brake cylinders, on the basis of the fluid pressurized by said pressurizing device, said braking pressure control apparatus further comprising:

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a diagnosing device for diagnosing each of said four pressure control valve devices for any abnormality thereof;

a first pressure control device operable when said four pressure control valve devices are all normal, to control the pressures in said plurality of brake cylinders, by controlling said four pressure control valve devices, respectively; and

a second pressure control device operable when said diagnosing device determines that one of said four pressure control valve device is abnormal, to control the pressure in each of the brake cylinders corresponding to the normal pressure control valve devices, by controlling said normal pressure control valve devices, while the brake cylinder corresponding to the abnormal pressure control valve device is disconnected from both of said first and second hydraulic pressure sources.

52. (Currently Amended) A braking pressure control apparatus for controlling a pressure of a working fluid in at least one first brake cylinder of a first cylinder group, and the pressure of the fluid in at least one second brake cylinder of a second cylinder group, said braking pressure control apparatus comprising:

a first hydraulic pressure source including (1) a power-operated pressurizing device for pressurizing the fluid, and (2) a plurality of pressure control valve devices corresponding to said at least one first brake cylinder and said at least one second brake cylinder, said pressure control valve devices being operable to control the pressures of the fluid in the corresponding wheel brake cylinders independently of each other, on the basis of the fluid pressurized by said pressurizing device;

a diagnosing device for diagnosing each of said plurality of pressure control valve devices for any abnormality thereof;

a second hydraulic pressure source operable by an operation of a manually operable brake operating member, to pressurize the fluid to a pressure which corresponds to an

operating force acting on said brake operating member and which is higher than a level of the fluid pressurized by said operating force;

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a cutting-off device including a first cut-off valve disposed between said second hydraulic pressure source and said at least one first brake cylinder and operable between an open state in which said second hydraulic pressure source and said at least one brake cylinder are communicated with each other and a closed state in which said second hydraulic pressure source and said at least one first brake cylinder are disconnected from each other, and a second cut-off valve disposed between said second hydraulic pressure source and said at least one second brake cylinder and operable between an open state in which said second hydraulic pressure source and said at least one second brake cylinder are communicated with each other and a closed state in which said second hydraulic pressure source and said at least one second brake cylinder are disconnected from each other;

a valve-device control device operable when said diagnosing device determines that at least one of said plurality of pressure control valve devices is abnormal, to control said first and second cut-off valves such that one of said first and second cut-off valves which corresponds to one of said first and second cylinder groups which includes said at least one pressure control valve device which is diagnosed to be abnormal is placed in said open state and such that the other of said first and second cut-off valves is placed in said closed state, said valve-device control device further controlling the pressure of the fluid in each brake cylinder of the other of said first and second cylinder groups, by controlling the corresponding normal pressure control valve device.

53. (Withdrawn)

54. (Original) A braking pressure control apparatus according to claim 53, further comprising a switching control device operable to command said switching device to establish said third state when an amount of increase of a braking force generated by said

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brake, which amount is desired by an operator of said brake operating member, is larger than a predetermined threshold.

55. (Withdrawn)

56. (Currently Amended) A braking pressure control apparatus for a hydraulically operated brake according to claim 1, comprising:

a power-operated hydraulic pressure source for pressurizing a working fluid and capable of controlling a pressure of the pressurized fluid, for operating said brake with the pressurized fluid delivered from said hydraulic pressure source; and

a pressure control device operable to control a pressure of the fluid of said brake, by controlling the pressure of the fluid pressurized by said hydraulic pressure source, on the basis of an operating amount of a manually operable brake operating member, and at least one of a rate of change of said operating amount and a derivative of said rate of change.

57. (Previously Added) A braking pressure control apparatus according to claim 1, wherein said running condition of the vehicle is represented by at least one value selected from the group consisting of: a value indicating a slipping state of said wheel; a yaw rate of the vehicle; a steering angle of the vehicle; a running speed of the vehicle; a deceleration value of the vehicle; a value indicating an environment of the vehicle; and values indicating operating states of manually operable members provided on the vehicle.